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I. Introduction

1. At its forty-second session, in 2009, the Commission requested the Secretariat to prepare a study on electronic transferable records in the light of proposals received at that session (A/CN.9/681 and Add.1, and A/CN.9/682).[1]

2. At its forty-third session, in 2010, the Commission had before it additional information on the use of electronic communications for the transfer of rights in goods, with particular regard to the use of registries for the creation and transfer of rights (A/CN.9/692, paras. 12-47). At that session, the Commission requested the Secretariat to convene a colloquium on relevant topics, namely, electronic transferable records, identity management, electronic commerce conducted with mobile devices and electronic single window facilities.[2]

3. At its forty-fourth session, in 2011, the Commission had before it a note by the Secretariat (A/CN.9/728 and Add.1) summarizing the discussions during the colloquium on electronic commerce (New York, 14-16 February 2011).[3] After discussion, the Commission mandated the Working Group to undertake work in the field of electronic transferable records.[4] It was recalled that such work would be beneficial not only for the generic promotion of electronic communications in international trade, but also to address some specific issues such as assisting in the implementation of the United Nations Convention on the Contracts for the International Carriage of Goods Wholly or Partly by Sea (New York, 2008) (the "Rotterdam Rules").[5] In addition, the Commission agreed that work regarding electronic transferable records might include certain aspects of other topics such as identity management, use of mobile devices in electronic commerce and electronic single window facilities.[6]

4. At its forty-fifth session (Vienna, 10-14 October 2011), the Working Group began its work on various legal issues relating to the use of electronic transferable records, including possible methodology for future work by the Working Group (A/CN.9/737, paras. 14-88). It also considered the work of other international organizations on that subject (A/CN.9/737, paras. 89-91).

5. At its forty-fifth session, in 2012, the Commission expressed its appreciation to the Working Group for the progress made and commended the Secretariat for its work.[7] There was general support for the Working Group to continue its work on electronic transferable records and the need for an international regime to facilitate cross-border use of electronic transferable records was emphasized.[8] In that context, the desirability of identifying and focusing on specific types of or specific issues

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[1] *Official Records of the General Assembly, Sixty-fourth Session, Supplement No. 17* (A/64/17), para. 343.

[2] Ibid., *Sixty-fifth Session, Supplement No. 17* (A/65/17), para. 250.

[3] Information about the colloquium is available at the date of this document from www.uncitral.org/uncitral/en/commission/colloquia/electronic-commerce-2010.html.

[4] *Official Records of the General Assembly, Sixty-sixth Session, Supplement No. 17* (A/66/17), para. 238.

[5] Ibid., para. 235.

[6] Ibid.

[7] Ibid., *Sixty-seventh Session, Supplement No. 17* (A/67/17), para. 82.

[8] Ibid., para. 83.

related to electronic transferable records was mentioned.[9] After discussion, the Commission reaffirmed the mandate of the Working Group relating to electronic transferable records and requested the Secretariat to continue reporting on relevant developments relating to electronic commerce.[10]

6. At its forty-sixth session (Vienna, 29 October-2 November 2012), the Working Group continued its examination of the various legal issues that arose during the life cycle of electronic transferable records (A/CN.9/761, paras. 24-89). The Working Group confirmed the desirability of continuing work on electronic transferable records and the potential usefulness of guidance in that field. It was widely felt that generic rules based on a functional approach should be developed encompassing various types of electronic transferable records (A/CN.9/761, paras. 17-18). As to future work, broad support was expressed for the preparation of draft provisions on electronic transferable records to be presented in the form of a model law, without prejudice to the decision to be made by the Working Group on the final form (A/CN.9/761, paras. 90-93).

7. At its forty-seventh session (New York, 13-17 May 2013), the Working Group had the first opportunity to consider the draft provisions on electronic transferable records. It was reaffirmed that the draft provisions should be guided by the principles of functional equivalence and technology neutrality, and should not deal with matters governed by the underlying substantive law (A/CN.9/768, para. 14). As to future work, it was noted that while the draft provisions were largely compatible with different outcomes that could be achieved, caution should be exercised to prepare a text that had practical relevance and supported existing business practices, rather than regulated potential future ones (A/CN.9/768, para. 112).

8. At its forty-sixth session, in 2013, the Commission noted that the work of the Working Group would greatly assist in facilitating electronic commerce in international trade.[11] After discussion, the Commission reaffirmed the mandate of the Working Group and agreed that work towards developing a legislative text in the field of electronic transferable records should continue.[12] It was further agreed that whether that work would extend to identity management, single windows and mobile commerce would be assessed at a future time.[13]

9. At its forty-eighth session (Vienna, 9-13 December 2013), the Working Group continued its work on the preparation of draft provisions on electronic transferable records. The Working Group also took into consideration legal issues related to the use of electronic transferable records in relationship with the Convention Providing a Uniform Law for Bills of Exchange and Promissory Notes (Geneva, 7 June 1930) and the Convention Providing a Uniform Law for Cheques (Geneva, 19 March 1931) (the "Geneva Conventions") (A/CN.9/797, paras. 109-112).

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[9] Ibid.

[10] Ibid., para. 90.

[11] Ibid., *Sixty-eighth Session, Supplement No. 17* (A/68/17), para. 227.

[12] Ibid., paras. 230 and 313.

[13] Ibid., para. 313.

II. Organization of the session

10. The Working Group, composed of all States members of the Commission, held its forty-ninth session in New York from 28 April to 2 May 2014. The session was attended by representatives of the following States members of the Working Group: Algeria, Armenia, Austria, Belarus, Brazil, China, Colombia, Denmark, Ecuador, France, Germany, Hungary, India, Indonesia, Italy, Japan, Mexico, Nigeria, Pakistan, Philippines, Republic of Korea, Russian Federation, Singapore, Spain, Thailand, Turkey, United States of America and Venezuela (Bolivarian Republic of).

11. The session was also attended by observers from the following States: Belgium, Cyprus, Libya, Malta, Poland, Qatar, Saudi Arabia and Sweden. The session was also attended by an observer from the European Union.

12. The session was also attended by observers from the following international organizations:

(a) *Intergovernmental organizations*: Maritime Organization of West and Central Africa (MOWCA) and World Customs Organization (WCO);

(b) *International non-governmental organizations*: American Bar Association (ABA), CISG Advisory Council, Comité Maritime International (CMI), European Law Students' Association (ELSA), Fédération Internationale des Associations de Transitaires et Assimilés (FIATA) and Law Association for Asia and the Pacific (LAWASIA).

13. The Working Group elected the following officers:

Chairman: Ms. Giusella Dolores FINOCCHIARO (Italy)

Rapporteur: Sr. Jair Fernando IMBACHI CERÓN (Colombia)

14. The Working Group had before it the following documents: (a) Annotated provisional agenda (A/CN.9/WG.IV/WP.127); and (b) A note by the Secretariat on draft provisions on electronic transferable records (A/CN.9/WG.IV/WP.128 and Add.1).

15. The Working Group adopted the following agenda:

1. Opening of the session.
2. Election of officers.
3. Adoption of the agenda.
4. Consideration of the draft provisions on electronic transferable records.
5. Technical assistance and coordination.
6. Other business.
7. Adoption of the report.

III. Deliberations and decisions

16. The Working Group engaged in discussions on the draft provisions on electronic transferable records on the basis of document A/CN.9/WG.IV/WP.128 and

Add.1. The deliberations and decisions of the Working Group are reflected in chapter IV below. The Secretariat was requested to revise the draft provisions to reflect those deliberations and decisions.

IV. Draft provisions on electronic transferable records

Draft article 7. Legal recognition of an electronic transferable record

17. The Working Group agreed that draft article 7 should be retained in its current form.

Draft article 8. Writing

18. With respect to draft article 8, a suggestion was made that a functional equivalence rule for "writing" might not be necessary in the context of the use of electronic transferable records as the fulfilment of that requirement was implied in the definition of "electronic transferable record" in draft article 3. In response, it was stated that the draft provisions should contain a general rule for establishing the functional equivalence of the "writing" requirement in substantive law. It was added that a rule on the "writing" requirement was necessary in light of the other rules on functional equivalence contained in the draft provisions. After deliberation, the Working Group decided to revisit the matter after its consideration of the draft articles on original, uniqueness and integrity.

19. As a drafting matter, it was agreed that the words "the information contained therein" should replace the words "the information contained in the electronic transferable record" as the meaning was evident. Subject to that change, the Working Group agreed that draft article 8 should be retained in its current form for further consideration.

Draft article 9. Signature

20. With respect to draft article 9, it was agreed that reference in subparagraph (a) to "electronic transferable record" should be revised to "electronic record" as that article dealt with a general signature requirement in the substantive law. It was further suggested that it might be necessary to elaborate on the reference to "reliability" in subparagraph (b)(i) in the broader context of the general reliability standard set forth in draft article 11 of Option C. After discussion, the Working Group agreed that draft article 9 should be retained in its current form, subject to the changes mentioned above.

Draft articles on original, uniqueness and integrity

21. The Working Group had a general discussion about the draft articles on original, uniqueness and integrity. It was mentioned that Option B could provide a good starting point as it clearly illustrated that uniqueness and integrity were elements required to achieve the functional equivalence of original in the electronic transferable record context. It was added that the main purpose of that functional equivalence rule should be prevention of multiple claims. It was also noted that certain elements contained in draft article 10 of Option B needed to be considered with respect to draft articles relating to control.

22. After discussion, it was agreed that Option B should be the starting point for further deliberation. It was further agreed that certain aspects contained in Options A and C — in particular, article 11 of Option C setting forth a general reliability standard — could also be considered for inclusion.

23. A number of suggestions were made with regard to the placement of draft article 10 of Option B. One suggestion was to move it to Section C of the draft provisions on the "Use of electronic transferable records" as a specific rule pertaining to their use. Another suggestion was to place the notions of uniqueness and integrity in Section C, while retaining a general form requirement rule in Section B. Yet another suggestion was that uniqueness should be discussed in the context of control. During that discussion, the view was expressed that the draft articles in Section B were an application of the general rules on electronic transactions to electronic transferable records and that the scope of those draft articles should be limited to electronic transferable records and should not extend to electronic records more generally.

Draft article 10. Original (Option B)

24. With respect to paragraph 1 of draft article 10, the Working Group agreed to retain the words "the original of" outside square brackets. It was also agreed that the words "its absence" should be retained and the words "the absence of the original" deleted.

25. With respect to draft article 10(1)(a), it was said that the first set of bracketed text would better accommodate both token-based and registry-based electronic transferable records. It was added that a reference to uniqueness was necessary in order to ensure singularity and to avoid multiple claims, and that the notion of control alone could not achieve singularity given the difference between control itself and the object of control, i.e., the electronic transferable record. It was therefore indicated that the first set of bracketed text was preferable to the second set, which was based on a circular statement by referring to the electronic transferable record itself.

26. On the other hand, it was indicated that the second set of bracketed text in draft article 10(1)(a) provided more flexibility, while explicit reference to uniqueness was not necessary given that the notion of control was sufficient to ensure singularity. It was added that a reference to the notion of uniqueness could pose not only challenges to technical implementation but also difficulties with respect to the practice of using multiple originals.

27. It was indicated that draft article 10(3)(a) did not sufficiently clarify the notion of integrity. It was explained that the notion of integrity contained in article 8 of the UNCITRAL Model Law on Electronic Commerce, which formed the basis for draft article 10(3)(a), was appropriate for documents such as contracts that did not typically foresee a number of changes during their life cycle. It was further explained that electronic transferable records had a dynamic nature that usually entailed a number of changes during their life cycle. Hence, it was suggested that draft article 10(3)(a) should be redrafted so that the notion of integrity would be based on the ability to preserve the information contained at the time of the issuance of the electronic transferable record and any authorized change made thereafter, until the moment of termination and archival of that record.

28. In that context, a suggestion was made to revise draft article 10(3)(a) along the following lines: "the criteria for assessing integrity shall be whether [each set of] information contained in the electronic transferable record, including any [authorized] [legitimate] change that arises throughout the life cycle of the electronic transferable record, has remained complete and unaltered". A number of observations were made with respect to that suggestion.

29. It was explained that the words "[each set of]" aimed to clarify that any set of information documenting legally relevant events during the life cycle of the electronic transferable record would need to remain complete and unaltered. In response, it was noted that reference to "any authorized change that arises throughout the life cycle of the electronic transferable record" was sufficient to address that point. After discussion, the Working Group agreed to delete the words "[each set of]".

30. The view was expressed that there was no need to distinguish between authorized and unauthorized changes and thus the words "any change" would suffice. It was further said that reference to an "authorized change" would require specifying the entity responsible for authorization.

31. Yet another suggestion was to retain the current text of draft article 10(3)(a) with the addition of the words "authorized or technical" before the word "change", which would capture both changes that were agreed by parties involved and changes of a technical nature. In response, it was noted that changes of a purely technical nature did not need to be mentioned in the draft provisions as they were of no legal relevance.

32. It was also suggested that a distinction should be made between authorized and legitimate changes. It was explained that authorized changes were those effected through the system established for the management of electronic transferable records while legitimate changes were those made in accordance with substantive law. It was further mentioned that the system established for the management of electronic transferable records should be designed to prevent unauthorized changes, which would protect the integrity of an electronic transferable record, and should be considered as retaining the integrity of the electronic transferable record if it kept a complete and unaltered record of all authorized changes. It was noted that an authorized change may include a change that was considered illegitimate under substantive law, for example, when the change was made using a stolen password.

33. After discussion, the Working Group agreed that draft article 10(3)(a) of Option B could read along the following lines: "the criteria for assessing integrity shall be whether information contained in the electronic transferable record, including any [authorized] change that arises throughout the life cycle of the electronic transferable record, has remained complete and unaltered". It was further agreed that clarification should be provided with respect to the meaning of "[authorized]", taking into consideration suggestions mentioned above (see paras. 30-32 above). Regarding how the changes of a technical nature would be treated under the draft provisions, it was agreed that guidance should be sought from article 8(3)(a) of the Model Law on Electronic Commerce and that reference to draft article 30 on retention of information in an electronic transferable record should be included in draft article 10(3)(a).

34. With respect to draft article 10(3)(b), the Working Group agreed to retain it in its current form.

35. It was suggested that functional equivalence rules in the draft provisions that included a reliability standard should be accompanied by a safeguard provision akin to article 9(3)(b)(ii) of the Electronic Communications Convention.

36. After concluding its discussion of draft article 10(3), the Working Group engaged in a general discussion on the functions performed by the "original" of a paper-based transferable document or instrument so as to identify how those functions could be achieved in an electronic environment.

37. It was indicated that the notion of "original" did not necessarily appear in national legislation. It was added that the same notion had limited relevance in international legal texts such as the Geneva Conventions.

38. In the same line, it was explained that reference to the paper-based notion of "original" was not necessary to avoid multiple claims in the context of electronic transferable records, since that goal could be achieved through the notion of "control". It was further explained that the notion of "control" could identify both the person entitled to performance and the object of control. It was added that resorting to the notion of "control" would make it possible not to refer to the notion of "uniqueness", which posed technical challenges.

39. In response, it was said that a functional equivalence rule for the notion of "original" was necessary, since substantive law required the original of a paper-based transferable document or instrument to request performance or provided consequences for its absence. It was added that the notion of "control" as a functional equivalent of the paper-based notion of "possession" could identify only the person entitled to claim performance, but that identification of the object of the performance demanded a functional equivalent of the paper-based notion of "original".

40. After discussion, the Working Group agreed that there was no need to include a functional equivalence rule for "original" in the draft provisions and decided to adopt the approach taken in Option A. In that vein, the Working Group agreed to: (i) delete draft article 10 of Option A; (ii) retain draft article 11 of Option A in square brackets for further consideration in light of its discussion on "possession" and "control"; and (iii) retain draft article 12 of Option A with the modifications agreed with respect to draft article 10(3) of Option B (see para. 33 above).

Draft article 11. General reliability standard (Option C)

41. After deliberation of draft article 10 of Option B, the Working Group discussed whether a general reliability standard as provided in draft article 11 of Option C should be included in the draft provisions.

42. It was stated that the presence of a general reliability standard could hamper the use of electronic transferable records as legal consequences of failure to meet those standards were not clear. It was further stated that caution should be exercised so as not to make the draft provisions untenable in practice. It was also noted that there was no need for a general reliability standard as each draft article containing a reliability standard should include in itself a provision specific to that context.

43. While there was some support for the deletion of a general reliability standard, it was urged that the draft provisions should provide general guidance on the meaning of reliability and set out the criteria for meeting that standard. It was noted that, while party autonomy could suffice to establish reliability standards in closed systems, there was a need for the draft provisions to set out reliability standards applicable to open systems. It was further mentioned that if a general reliability standard were to be included, it should be drafted in a manner mindful of technological neutrality.

44. The Working Group continued its consideration of draft article 11 of Option C on the basis of a proposal incorporating in draft article 11(2) references to: quality of staff; sufficient financial resources and liability insurance; and existence of a notification procedure for security breaches. The proposal was drafted in prescriptive terms. It aimed at being technology-neutral and would not apply to closed systems as defined in the law or by agreement.

45. That proposal received some support. It was suggested that a reference to reliable audit trails should be added.

46. However, the view was expressed that the reliability requirements set forth in that proposal were too detailed and that the provision was regulatory in nature. It was added that the adoption of such detailed requirements could impose excessive costs on business and ultimately hamper electronic commerce. It was further noted that those requirements could lead to increased litigation based on complex technical matters. It was suggested that a reference to reliable methods based on internationally accepted standards and practices should instead be inserted in the draft provisions.

47. In response, it was noted that loosely defined reliability requirements were more likely to foster litigation and hinder legal predictability, while the revised draft article 11(2) would increase legal certainty by better specifying the elements relevant for a general reliability standard.

48. It was expressed that draft article 11(2) did not relate to the reliable method referred to in the specific articles setting out functional equivalence rules, but was of the nature of a set of standards for third-party service providers. It was observed that the Working Group would need to consider what would be the consequence of non-compliance with those proposed standards. It was explained that the reliability requirements contained in the proposal would apply to all system providers for electronic transferable records and not only to third-party service providers. It was suggested that specific functional equivalence provisions should refer to "as reliable as appropriate" as the standard of reliability.

49. After discussion, the Working Group agreed to further consider the revised draft article 11(2) as a possible general rule on system reliability and in connection with provisions relating to third-party service providers. The Working Group also agreed to consider the adoption of specific standards for each draft provision referring to a reliable method.

Draft article 15. Issuance of multiple originals

50. With respect to the transposition of the practice of issuing multiple originals of paper-based transferable documents or instruments to an electronic environment

(A/CN.9/WG.IV/WP.128/Add.1, paras. 6-7), the Working Group was informed of examples of practices of issuing multiple originals and requested the Secretariat to continue its efforts in compiling existing practices.

Draft article 18. Possession

51. It was suggested that the heading of draft article 18 should be "Control" as that would better reflect the content of that article. It was responded that draft article 18 aimed at establishing the functional equivalence of the paper-based notion of possession, and that reference to possession would conform to the headings of similar provisions such as draft articles 20 and 21.

52. It was suggested that the words "[de facto]" should be deleted from draft article 18 with the understanding that that concept would be contained in the definition of "control" in draft article 3.

53. After discussion, the Working Group agreed to retain the heading "Possession" and to delete the words "[de facto]" in draft article 18.

54. The Working Group then considered the definition of "control" as provided in draft article 3. It was recalled that the Working Group had understood control to be a matter of factual nature similar to actual possession and that three sets of square bracketed text had been prepared to reflect that notion.

55. A number of suggestions were made with respect to the three sets of square bracketed text in draft article 3. Regarding the first and second sets, it was said that defining "control" using the word "power" ran the risk of a circular definition as "control" and "power" were synonymous. Regarding the first set, it was said that the words "de facto" should not be used as they gave the impression that there could be control which was not factual. With regard to the third set, it was noted that defining "control" using the word "control" was circular and redundant.

56. The view was expressed that the definition of control should be deleted from the definitions as it was merely a statement that control was of a factual nature and was not a true definition. It was also said that the definition of control should be left to national law and would depend on the system established for management of electronic transferable records.

57. Another view was that each draft article relating to control relied on the definition of control. It was added that if the definition of control included only reference to its factual nature and did not refer to exclusivity, difficulties could arise in understanding other relevant provisions.

58. It was recalled that the Working Group had decided to draft a definition of "control" as a number of articles made reference to "control". It was suggested that otherwise, each draft article relating to control would need to refer to the factual nature of control.

59. There was general support that while the three sets of square bracketed text in draft article 3 might not properly constitute a definition, there was merit in illustrating the factual nature of control in the draft provisions. It was further clarified that functions of third-party service providers or intermediaries of the electronic transferable record should not be covered under the notion of "control".

60. After discussion, the Working Group agreed to proceed with the working assumption that: (i) "control" of an electronic transferable record would mean the factual power to deal with or dispose of that electronic transferable record; and (ii) the power of the third-party service provider or the intermediary to deal with or dispose of the electronic transferable record did not constitute control. The Working Group postponed its decision on whether such a statement should be included in the draft provisions, and if included, whether it should be in the article on definitions, in specific articles referring to control or in a separate article.

61. With respect to draft article 18(2), it was recalled that it was the only provision in the draft provisions that embodied the idea that an electronic transferable record should be subject to control from the time of its issuance until it ceased to have any effect or validity. However, it was explained that an electronic transferable record need not necessarily be subject to control during its entire life cycle. It was said that that occurred, for instance, when a token-based electronic transferable record was lost. Therefore, it was suggested that that paragraph should instead indicate that an electronic transferable record was capable of being controlled during its life cycle, particularly in order to allow for its transfer. Moreover, it was stressed that such a rule could provide guidance to legislators as well as designers of the electronic transferable record management system that electronic transferable record should be capable of being subject to control. In response, it was noted that the notion of being subject to control was implicit in an electronic transferable record.

62. After discussion, the Working Group decided to revise draft article 18(2) along the following lines: "[an electronic transferable record shall be capable of [control] [being subject to control] by [a single] [one or more] person during its life cycle]". As for its placement, it was suggested that it could be included in the definition of electronic transferable record, or in the provision on uniqueness, or in a separate article.

Draft article 19. Reliability of method for establishing control

63. It was said that Options X and Y of draft article 19 did not fully achieve the intended goal of providing guidance in assessing the reliability of the method used for establishing control in draft article 18.

64. It was suggested that draft article 18 contained a functional equivalence rule and that the related reliability standard should be drafted along the lines of draft article 9. It was explained that that approach would offer flexibility in assessing reliability in the specific contexts, and this was also desirable since too high a standard could hamper electronic commerce, while too low a standard could prove useless.

65. After discussion, the following text was suggested for consideration by the Working Group as draft article 18:

> "Where the law requires the possession of a paper-based transferable document or instrument, or provides consequences for the absence of possession, that requirement is met [with respect to the use of an electronic transferable record] [through control] if:
>
> [(a) A method is used to establish control; and]

(b) The method used is either:

(i) As reliable as appropriate for the purpose for which the electronic transferable record was created, in the light of all the relevant circumstances, including any relevant agreement; or

(ii) Proven in fact [to have fulfilled the functions of control] [to have been reliable], by itself or together with further evidence."

66. With respect to that suggestion, it was mentioned that the draft provisions did not have reference to the exclusivity of control, which was essential to ensuring singularity of the claim and therefore the operation of electronic transferable records. It was added that specific reference to exclusive control might avoid the need to refer to the notion of "uniqueness", which posed legal and technical challenges. In response, it was recalled that the Working Group had previously considered that exclusivity was implicit in the notion of control (see A/CN.9/797, para. 74).

67. Upon further consideration of the proposed revised text of draft article 18, the Working Group agreed that: (i) only the first square bracketed text in the chapeau should be retained outside square brackets; (ii) subparagraph (a) should be retained outside square brackets with the addition of the words "of that electronic transferable record" after the word "control"; (iii) subparagraph (b)(ii) should be revised to state "[p]roven in fact to have fulfilled the functions described in subparagraph (a) above, by itself or together with further evidence"; and (iv) the word "created" in subparagraph (b)(i) could be substituted with the word "generated" or clarified to indicate that reliability could be assessed for the purposes of the type of electronic transferable record.

68. Thereafter, the Working Group continued its discussion on how to address exclusivity of control in the draft provisions. It was generally agreed that the draft provisions could address the exclusive nature of control explicitly, either in the definition of "control" or as a separate rule, or not address the issue explicitly.

69. The view was expressed that, similar to a paper-based transferable document or instrument, exclusivity of control over an electronic transferable record would be a logical result achieved through the uniqueness of that record. However, it was widely felt that the notion of exclusivity of control should be distinguished from the notion of uniqueness as they served different purposes and operated independently (see A/CN.9/797, paras. 48-50). For instance, it was explained that it was possible to conceive exclusive control over a non-unique record, or, conversely, non-exclusive control over a unique record. It was noted that achieving the notion of uniqueness of an electronic transferable record might be unrealistic in a registry-based system where no unique object might exist, but it might be possible to create a unique token in a token-based system. It was expressed that uniqueness should not be referred to in the draft provisions as a quality of an electronic transferable record.

70. It was stressed that the draft provisions should aim to prevent multiple claims of the same obligation. It was also noted that there could be instances where multiple parties could be entitled to performance of the obligation and therefore control did not need to be exercised by one person only.

71. The Working Group proceeded to prepare a provision, which would replace draft article 11 of Option A on uniqueness. It was suggested that that provision should offer a functional equivalence rule for the use of paper-based transferable documents or instruments by setting forth the requirements to be met by the use of an electronic record. In that context, it was suggested that the provision should refer to "one or more than one" electronic record or refer to "authoritative information" to illustrate that there might, in certain registry systems, be data elements in the system that, taken together, provided the information constituting the electronic transferable record, but with no discrete record constituting the electronic transferable record. In response, it was mentioned that the current definition of "electronic record" in draft article 3, which contained the word "information", was sufficiently broad to cover that possibility.

72. Furthermore, it was suggested that a reliable method should be employed to identify an electronic record as the authoritative or operative electronic record to be used as the electronic transferable record. With respect to that suggestion, it was pointed out that an "electronic transferable record" was by definition authoritative or operative and thus those qualities need not be mentioned. While it was also suggested that a reliable method should be employed to render an authoritative or operative electronic record distinguishable from other records containing the same information, it was generally viewed that such a provision was redundant.

73. A further suggestion was that a reliable method should be employed to prevent unauthorized replication of the electronic transferable record. It was further suggested that a reliable method should be employed to also retain the integrity of the electronic transferable record. Another suggestion was that a reliable method should be employed to render the electronic record capable of being subject to control during its life cycle, as had been discussed in the context of draft article 18(2) (see paras. 61-62 above).

74. After discussion, the Working Group agreed to delete article 11 of Option A on uniqueness, which it had put in square brackets (see para. 40 above) and to introduce a new draft article along the following lines:

> "Draft article **. [Operative electronic record] [Paper-based transferable document or instrument]
>
> 1. Where the law requires the use of a paper-based transferable document or instrument or provides consequences for its absence, that requirement is met by the use of [an] [one or more than one] electronic record if a reliable method is employed:
>
> (a) To identify that electronic record as the [operative] electronic record to be used as an electronic transferable record and to prevent the unauthorized replication of that electronic transferable record;
>
> (b) To render that electronic record capable of being subject to control during its life cycle; and
>
> (c) To retain the integrity of the electronic transferable record.
>
> 2. A method shall satisfy paragraph 1, if ..."

75. With respect to paragraph 2 of the above-mentioned draft article, it was suggested that the revised draft article 12 of Option A could provide guidance for

the reliability standard relating to subparagraph (c). The Secretariat was requested to provide similar text relating to subparagraphs (a) and (b). As to the placement of the draft article, it was suggested that that draft article should be placed closer to the draft article on control and thus in Section C.

Draft article 20. Delivery

76. The Working Group agreed to retain draft article 20 in its current form.

Draft article 21. Presentation

77. It was said that draft article 21 did not fully capture the functions of presentation, and therefore did not provide an adequate functional equivalence rule on presentation. It was indicated that further elements needed to be included in addition to demonstration of control, such as the intention to present the electronic transferable record. It was also suggested that the draft article should state that the person "required to present" must demonstrate that it has control.

78. In that connection, it was noted that in a paper-based environment, presentation could mean presentation for performance as well as for other purposes, such as presentation of a bill of exchange for acceptance. It was recalled that the draft provisions also referred to presentation in draft articles 26 and 27. In light of such variety in meanings, it was stressed that a careful analysis of all the functions fulfilled by presentation of a paper-based transferable document or instrument was necessary.

79. The Working Group agreed to retain draft article 21 in square brackets, for consideration after clarifying the possible meanings and functions of presentation.

Draft article 22. Endorsement

80. It was recalled that in a paper-based environment, one peculiar feature of endorsement was its placement on the back of the document or of the instrument or on a slip of paper attached thereto ("allonge") (see A/CN.9/797, para. 95). Hence, it was suggested that draft article 22 should contain a reference to those modalities of endorsement. In response, it was noted that while national laws contained a wide range of formal prescriptions for endorsement in a paper-based environment, the draft article aimed to achieve functional equivalence of the notion of endorsement regardless of those requirements. It was added that other functional equivalence rules in the draft provisions did not refer to specific paper-based form requirements and that referring to certain form requirements but not others might be interpreted as excluding those other requirements from the scope of the draft article, thus ultimately frustrating its purpose. After discussion, the Working Group agreed to insert the words "in any form" after the first occurrence of the word "endorsement" in draft article 22.

81. It was explained that the words "[or permits]" aimed to capture cases where the law did not require endorsement but allowed it. The Working Group agreed that the draft article should be revised to address such instances in a manner consistent with other draft articles. The Working Group also agreed to retain the words "the endorsement" outside square brackets and to delete the words "[the intention to endorse]" as the former was clearer. With respect to the second set of bracketed text, the view was expressed that the words "logically associated or otherwise linked to"

were technically more accurate and should be retained. However, the view was also expressed that the two options contained in that set were not mutually exclusive and thus should be retained jointly.

Draft article 23. Transfer of an electronic transferable record

82. With respect to draft article 23, it was recalled that paragraphs 1 and 2 were intended to serve different purposes. In particular, paragraph 1 was included to convey that transferring control of the electronic transferable record was necessary in order to transfer that record. In that respect, it was suggested that paragraph 1 could be deleted as draft articles on possession, delivery and endorsement were sufficient.

83. It was explained that the goal of paragraph 2 was to facilitate a change in the modalities of circulation of electronic transferable records when permitted by substantive law.

84. In that context, the concern was raised that it would be inappropriate for the draft provisions to refer to the term "holder", which had legal implications under the substantive law, in spite of the qualified definition of that term in draft article 3 to a "person in control".

85. After discussion, it was agreed that paragraph 1 should be deleted and that the word "holder" should be replaced with the words "person in control" throughout the draft provisions.

Draft article 24. Amendment of an electronic transferable record

86. The Working Group agreed that a rule on a reliable method to record legally relevant changes to the information contained in an electronic transferable record should be inserted, in square brackets, in the draft provisions for consideration at a future session.

V. Technical assistance and coordination

87. The Working Group was informed of developments in the legal framework for electronic communications in Colombia, which was based on UNCITRAL texts. Various achievements in the implementation of that legal framework were illustrated. Reference was made to the insertion of provisions relating to electronic commerce law in free trade agreements.

88. The Working Group also heard a presentation by a representative of the European Commission on the draft Regulation on Electronic Identification and Trust Services for Electronic Transactions in the Internal Market (e-IDAS), which dealt with mutual recognition of electronic identification and electronic trust services (e-signature, e-seals, time stamping, e-delivery, e-document and website authentication) in the European Union.

89. The Working Group noted that several aspects of the draft Regulation, for example, electronic signatures, time stamping services and reliability standards, were relevant for its current work. The importance of coordination between regional

and global legislation in this field critical to the development of cross-border electronic commerce was stressed.

90. After discussion, the Working Group asked the Secretariat to continue compiling information relating to identity management, authentication, trust services and other areas relevant to its current work, such as single window systems or mobile payments, including by organizing or participating in workshops, colloquia and other similar events, subject to availability of resources. It was reminded that the extension of the mandate of the Working Group to other topics discussed in document A/CN.9/728 and Add.1 as discrete subjects (as opposed to their incidental relation to electronic transferable records) would need to be further considered at a future Commission's session (A/66/17, para. 239).

91. The Working Group heard a report on the progress made at the "Ad hoc Intergovernmental Meeting on a Regional Arrangement for the Facilitation of Cross-border Paperless Trade" (Bangkok, 22-24 April 2014). The potential relevance of that draft arrangement for the promotion of the adoption of UNCITRAL texts on electronic commerce was highlighted.